

Chapter 14

Enlightenment from the Results of GEC Evaluation

Since the 1970s, with the increasingly prominent of population growth, resource shortages, energy crisis, food security, environmental pollution, soil degradation, biodiversity destruction and other issues, the global economic developments as well as the human security are under serious threat. The environment protection and the sustainable development become a systems project for all mankind. In 1972, the Club of Rome published “The Limits to Growth”, which marked that the environmental issues had become a common concern of global level. The awareness of environmental issues has increased from the national level to the regional level or even global level. The global environmental issue is not only a natural problem, but it is more a global social problem. In this report, based on the analysis of the global 133 countries or regions for qualifying environmental competitiveness, it reports the great efforts on protecting the environment in different countries and its positive results. Meanwhile, we can see the relative differences on the environmental competitiveness in different countries and their problems, which can provide some enlightenment for human being to response to global climate change, sustainable development.

14.1 Insisting on Strengthening the Environmental Protection and Combining the Development with the Protection

The environmental protection and the economic development are closely related to the human survival and the development. Also the environment protection has a close relationship with the economic development. We must protect our environment in our economic development and actively explore new path of the environmental

protection under the economic development. The world provides the necessary raw materials and energy for economic development and accommodates the waste generated by economic activity. Meanwhile, the economic development has also counterproductive effect on the environment. The countries with better economic foundation pay more attention and set up higher standard to the environmental development. The outbreak of the global financial crisis makes the governments adjust the focus of the work to deal with recession and protect jobs as a top priority and the commitment to the environment becomes weakened, which lead to lay aside the global climate and environmental issues. This makes the sustainable world development facing a more complex situation and dealing with all kinds of severe challenges. Under this background, how to handle correctly the relationship between the economic development and the environmental protection has a great practical significance on the integration of prospective development direction, the ideas of innovation and development and the mode and method of development.

In order to achieve the above goals, according to their own natural resources, environmental capacity, ecological conditions, population and national development, all countries should understand their functional position in the global environment and the development direction. Based on the environmental capacity and resource capacity, they should combine the economic development planning and the environmental protection together. For some relatively developed countries or regions whose environmental resources and supply are insufficient should implement optimized development strategy, they should adhere to environmental priorities, develop high-tech industries, optimize industrial structure, accelerate the upgrading of industries and products and firstly complete total amount of emissions reductions task. For some relatively developed countries or regions whose resources are more abundant with higher development potential should implement key projects development strategy. They should accelerate infrastructure construction and promote industrialization and urbanization with scientific and rational use of environmental carrying capacity. Meanwhile, they should control the pollutant emissions strictly and achieve increasing the production without increasing pollution. For some relatively developed countries or regions whose ecological environment is fragile should implement restricted development strategy. They should set up the conservation priorities, select a reasonable development direction, develop local advantage industries, ensure the restoration and conservation of ecological functions and gradually restore the ecological balance.¹ They should take the issue of environment protection into consideration as a part of economic and social development. They should insist on economized, security, clean development to achieve economic and environmental sustainable development. At the same time, they should explore actively new methods of small, effective, low environmental emissions. Even in difficult post-crisis era, it should not take the expense of the environment in order to make up for economic losses, but in accordance with the symbiotic development and inclusive growth requirements, it should promote sustainable development on economic, environmental,

¹http://www.gov.cn/zwgc/2005-12/13/content_125736.htm

cultural and other social aspects to achieve mutually beneficial and win-win within the limits of the coordinated development between maintaining a reasonable economic and environmental development.

14.2 Improving the Utilization Efficiency of Resources and Promoting Resource Conservation and Recycling

Rational use of resources and protecting the environment is a necessary requirement for achieving sustainable development. With the rapid development of the world economy and population, many countries, the contradictions of lacking of fresh water, land, energy, mineral resources and other resources become more prominent. The pressure from the environment is increasing. The development in waste of resources and with the expense of the environment cannot be sustained. Only with the efficient use of resources and environmental protection, the sustainable development could be achieved.²

Therefore, all countries should increase the sense of responsibility and urgency to construct a conservation-oriented society. In the aspect of social production, circulation and consumption of the various fields of economics and society, we must make full use of resources and improve the efficiency of resource use to minimize the consumption of resources and maximize the economic and social benefits. We should accelerate the adjustment of industrial structure and shift the economic developing form from industry-driven to industry, services and agriculture co-driven. We should supporting the transition from funds and natural resources-driven to human capital and technological progress-driven. We should support the transition from the one-way model of “Resources-Products-Waste” to the circulation pattern of “Resources-Products-Waste-Renewable Resources”. We must gain the economic growth based on the optimization of economic structure, improvement of the scientific and technological content, quality and efficiency improvement. Then we can gradually form the low-input, high-output, low-consumption, low-emission, recyclable and sustainable economic growth. In agriculture, we should actively adopt water-saving technologies and develop water-saving agriculture. In the development and utilization of mineral resources, we should strengthen the various types of mineral resources comprehensive development and utilization. We can promote the development of deep-processing technology and promote the utilization of the tailings and waste rock. With the principle of “Reduce, Reuse and Recycle”, we should develop the circular economy. With low consumption, low emission, high efficiency, we should actively promote the scrap iron and steel, non-ferrous metal scrap, waste paper, waste plastic recycling use project and vigorously support the remanufacturing of used mechanical and electrical products. Finally, we can establish and improve waste separation and sorting systems to improve garbage collection efficiency.

²Gao Jin-tian, Dong Fang. Environmental Protection and Sustainable Development of Economic Analysis [J]. Ecological Economy, 2005(1):82–85.

14.3 Increasing the Capital Investment on the Environmental Infrastructure Construction and Enhancing the Capacity of the Environment Carrying

Strengthening environmental protection infrastructure is an important measure to expand domestic demand and stimulate economic development, which can bring considerable economic, social and environmental benefits, and can improve the investment structure, industrial structure and distribution of productive forces. It is also the basic measures to the comprehensive improvement of environmental pollution and destruction, and to protect and improve the environmental quality of urban and rural.³ Increasing investment in environmental protection is a key method to repay the ecological debt and realize the economic, social and ecological sustainable and coordinated development. Therefore, every country in the world must strengthen the dominant position of government investment in environmental protection, includes the environmental protection in all levels of the budget for fiscal year and gradually increases the investment for the environmental infrastructure and the environment carrying capacity. They should increase the pollution control, the ecological protection, the environmental protection and the investment of environmental regulatory capacity building funding and build up the environmental pilot demonstration. They can focus on building up or perfecting the sewage pipe network and the living garbage waste collection and transportation facilities. People should seriously do the work of investigation and study and select the right infrastructure projects. Focused on the key project construction, they should further improve the environmental infrastructure, establish and improve the diversification of environmental investment and financing mechanism, encourage and support social capital to participate in ecological construction and environmental infrastructure with different kinds of forms. They can implement the green finance policies through building up a corporate credit information database in the financial institutions by recording the environmental integrity enterprise and environmental violations enterprise, which can give full play to the role of financial institutions and credit control to the enterprises on the environmental protection.

14.4 Increasing the Efforts on the Environmental Regulation and Governance to Effectively Improve and Enhance the Environmental Quality

Addressed as an important way and mechanisms to global environmental issues, the efforts on the environmental monitoring and management are related to the destiny of mankind and have become a hot issue. All the countries must build up the

³Cai Shou-qiu. Study on Strengthening Environmental Protection Infrastructure [J]. Environment Herald, 1998(5):1-4.

mutual coordination and cooperation relationship in the face of the challenges of global environmental problems. The most important matters in the current global environmental governance are the items of how to invest human, material and financial resources under a certain kind of condition. Different countries in the world demand more and more interests of global environmental governance and the games become more and more complex, which conduct very slow progress of the global environmental governance.

Environmental governance is a systematic project, which requires a large number of integrated and collaborative bodies to coordinate with each other. Every country should recognize the interests in the global environmental governance and enhance the awareness of participation in global environmental governance. They must establish a diversified investment mechanism from the organizations of government, enterprises and society and build up a mechanism of some parts of pollution control facilities operated by the market organizations. They should improve environmental protection system and perfect a unified, coordinated and efficient environmental regulatory regime. They should build up an announcement system of environmental quality and regularly publish in various regions of the indicators related to environmental protection, publish air quality, urban noise, drinking water quality, river water quality and other environmental information, timely release of information on pollution incidents. They should strengthen social supervision through hearings, feasibility studies or social publicity and other forms of public opinion. They should improve the environmental monitoring network, strengthen the environmental quality monitoring and increase the capacity of the pollution monitoring detection technology and routine testing equipment and the environmental emergency monitoring. Some countries should accelerate the construction of nuclear safety information system and implement information resources sharing mechanism. Using the coercive power of government, they should strengthen the environmental supervision, establish a government integrated decision-making mechanism for the ecological construction and environmental protection and improve a short, medium and long-term planning to the environmental protection.

14.5 Strengthening the Coordination and Cooperation in the World Climate and Environmental Issues to Achieve Mutual Benefit and Win-Win

From the view of either the time or the space, the impact of the global environmental problems crosses the borders. Every country has no choice but to sit in the same boat and must cooperate to cope with the current tough stance environmental situation.⁴ The earth is a whole environment and the environments within the jurisdiction of

⁴Wu Hao, Ma Bao-bin. China's Participation in Global Environmental Governance: Background, Present Situation and Countermeasures [J]. Journal of Changchun University of Technology, 2011(5):8-11.

various countries are integral part of the overall environment. As a matter of the fact, many of the global environmental problems are often an extension of environmental issues within a certain country. The global problems cannot be solved by an isolated country. We must strengthen cooperation and overall coordination. A number of global issues and common public crisis makes increasingly the necessary of the international cooperation and the common security and common development concept has increasingly become the consensus of statesmen.⁵

In addition to concern the world rankings in the global environment under the competitiveness on the global environment research, it pays more attention to the achievement on forming the global environmental awareness and promoting the environmental technology, the international cooperation and building of the international environmental institution, which makes the global environmental governance achieving a substantial result. International environmental cooperation should become an important part of national environmental protection. The coordination mechanisms between local governments among different countries are the important safeguards to the comprehensive environmental cooperation standardized and orderly functioning. Every country should adhere to the “Common but differentiated Responsibilities” principle to promote the development of global environmental governance.⁶ Especially those of the developing countries are facing shortage of funds, lack of technology, weakness of building capacity and other difficulties in global environmental governance. In this case, they are more badly in need to strengthen international cooperation for global environmental governance. From the perspective of development aid to care the global environmental governance, it is a kind of responsible representation, which includes both political arrangements, but is also conducive to the concept promotion standardization and the trade volume increases.

14.6 Strengthening the Environmental Advocacy Efforts to Enhance the Environmental Awareness of People

Protection of the environment is everyone's responsibility. The level of public environmental awareness is a measure of a country and nation on the degree of civilization. Only when everyone conscientiously fulfill their environmental obligations and foster environmental awareness, then we can truly solve environmental problems. The environmental advocacy work is a kind of solid foundation work for environmental work and plays an important role in supervising the environmental work. Protecting the environment is a common cause of the people all over the world and the environmental publicity and education is important to achieve the national environmental

⁵Wu Zhi-cheng, Wang Tian-yun. New Challenges of Global Governance under Globalization [J]. Journal of Nanjing University, 2011(2):43–47.

⁶Yu Hong-yuan. Study on the Global Environmental Governance and China Environmental Diplomacy Looking from the United Nations Summit on Sustainable Development [J]. Power and Energy, 2012(4):311–315.

protection. Currently, the people especially in some economic development relatively backward countries should increase environmental awareness. People never realize that protecting the environment also requires a process and the process itself is a process of environmental education.

Countries around the world should further increase the efforts on the environmental advocacy of the national policy on environmental protection and promote the environmental culture and the ecological civilization. They should make full use of various newspapers and magazines, television and radio, the Internet and other media advocacy role by refining shocking data and user-friendly screen to edit all kinds of the environmental pollution hazard information so that the public can be more intuitive to understand their own environmental conditions and consciously take actions to protect the environment. Every year, they should take 4.22 Earth Day and 6.5 World Environment Day as an opportunity to promote environmental resources education, establish mechanisms for public participation and carry out selection of activities such as environmental protection people on establishment of green home, green campus to continuously improve the quality of the environment and achieve maximum harmony between man and nature development. They should support the establishment of various forms of non-governmental environmental organizations work together the government environmental organizations. Also it is important to expand environmental publicity and education pilot, strengthen basic education on the environmental protection and continuously improve national environmental awareness so that the public is more concerned about environmental protection and understand and support environmental protection and participation in environmental protection.

14.7 Developing the Environmental Technology and Innovation to Solve the Global Environmental Problems

Environmental technology has become one of the most important the means to solve environmental problems. The environmental problems rely a lot on the development of science and technology. The environmental technology and innovation becomes a necessary condition for the construction of ecological civilization. To build an ecological civilization, we should vigorously promote scientific technological innovation. Currently, the developed countries have entered on the environmental science study stage of the integrated planet's ecosystems. But the majority of developing countries started the environmental technology late and the factors of the weakness in the infrastructure, low capacity of independent innovation, inadequate with the environmental infrastructure reserves constrain their competitiveness rankings in the global environment.

Environmental Science and Technology should follow the general idea of environmental protection with "the total reduction to improve the quality and prevent from the risk" and promote the environmental protection in leaps and bounds

through scientific progress and technological innovation.⁷ People should promote the share on the environmental protection technologies. The developing countries should introduce the advanced environmental technologies and management experience from the developed countries to their environmental technology, equipment and management level. They should strive to master core technologies and key technologies through the introduction of digestion and absorption and also focus on the development of proprietary of the environmental technology. They should strengthen the technological innovation and build up a system which includes resource development, raw materials development, manufacturing, distribution, consumption, recycling processes of resource-saving technical support system. They should promote the construction of the state environmental protection laboratory, engineering technology center, field observation and research station. They should develop information technology, biotechnology, fundamental and pioneering technology and accelerate the development of energy-saving environmental protection, biomedicine and other strategic emerging industries. They should transform traditional industry and develop ecological economy, circular economy and low-carbon economy with advanced technology. They should adjust the industrial structure to change the mode of economic growth and build up a low-carbon, green growth of modern industrial system to achieve a development the new industrialization with low pollution, low consumption and high efficiency.⁸

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⁷<http://baike.baidu.com/view/8003740.htm>

⁸ Xiao Xian-jing. Ecological Civilization in the Perspective of Science and Technology Steering – Science and Technology in Recent Years of China Green Innovation [N]. China Social Science Newspaper, 2012.9.22.